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FOOD NEWS

FOR CONSUMERS

United States Department of Agriculture

Volume 4

Number 1

Spring 1987

AUG 18 '87

... JENNIFER S. RANCH



"Natural" Labeled Meat & Poultry —
What's It All About?

Help With Handling Those
Crazy New Food Packages

Pullout Poster Inside —
"Inspector" Chicken Shows How to Spring-Clean Your Kitchen

FOOD NEWS

FOR CONSUMERS

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Administrator
Donald L. Houston

**Director, Information
and Legislative Affairs**
Nancy Robinson

Chief, Information Branch
Karen Stuck

Editor
Mary Ann Parmley

Production
Maxine Grant

Marketing
Laura Fox

Art Director
Deborah Taylor

Cover Illustration
Richard Thompson

Photography
Yuen-Gi Yee
Lester Shepard

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Consumers*, FSIS/ILA, Room 1160 South,
U.S. Department of Agriculture,
Washington, D.C. 20250.
Telephone: (202) 447-9113.

Ask the Consumer Advisor



As the Consumer Advisor for the U.S. Department of Agriculture, all kinds of questions about agriculture, health and nutrition reach my desk. Many occur with some frequency, and I'd like to address some of these concerns in a new column — "Ask the Consumer Advisor" — beginning in this issue.

Dear Ms. Chadwick:

I've heard that if I take extra supplements of Vitamin E, I will look younger. Is that true?

Dear Reader:

Today, myths about vitamins abound, particularly about Vitamin E. The "more is better" philosophy seems to have taken hold. But this is entirely unfounded in this case.

While taking supplements or using cosmetics containing Vitamin E may not hurt you, there is no scientific evidence that these things can make you look younger. Vitamin E is an anti-oxidant, which means it acts as a preservative in food. Perhaps its preservative ability in food has given rise to the fallacy that Vitamin E slows the aging process in people.

You needn't worry about getting enough Vitamin E because it is found to some extent in most foods and abundantly in leafy vegetables, whole grain foods and vegetable oils. Also, unlike some vitamins like Vitamin C, the body can store "E" so you do not need a daily dose. The Food and Drug Administration (FDA) says it is almost impossible to find adults with a Vitamin E deficiency. There are some exceptions — people who are unable to absorb and digest fats, and premature or low-weight infants may need supplements of Vitamin E. Probably you are already getting what you need from the foods you eat.

There are no magic potions that guarantee eternal youth. For now, your chances of aging gracefully rest on other factors, such as your genetic predisposition and life style — for example, whether you exercise and maintain a desirable weight.

Ann Collins Chadwick, Director
Office of the Consumer Advisor
Phone: (202) 382-9681

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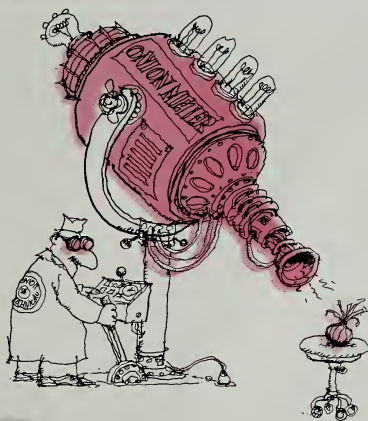
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Consumer Education

Hotline Calling — Those Crazy New Packages!

Food manufacturers and processors are putting all types of technology to work to satisfy consumers. The advances aren't just limited to products, but extend to packaging as well.

And with all the innovations in packaging, consumers are understandably confused about how to handle the new items. Here are a few questions about "those crazy new packages" we've heard on USDA's Meat and Poultry Hotline, 800-535-4555.

Q: Is it safe to freeze those new non-refrigerated fruit juice cartons?

A: The juice cartons, which are aseptically packaged, will be fine if they're frozen (see #1 in photo). The multi-layered packaging is strong and won't tear as the freezing juice expands. If you pack the frozen carton in a lunch, it should thaw, but still be cool by lunch time.

Aseptic packaging involves sterilizing the product and container separately. Then product and package are brought together in a sterile environment, where the container is filled and sealed. Packaging ranges from the multi-layered type used in the juice boxes to the plastic-foil-type seal used for products like individual pudding cups. Aseptic juices have a shelf life of 6-8 months.

Q: Recently I tried some of that new milk that you don't need to keep in the refrigerator. It didn't taste like regular milk. Was something wrong with it?

A: The milk you drank was aseptically packaged — fresh milk processed at extremely high temperatures

(about 280° F) and sealed in a sterile, multi-layered container. While perfectly safe and wholesome, this milk (see #2) does taste different from the kind of milk you're used to.

This new taste, often described as "richer" than regular milk, is not an indication that something's wrong

with the product. Aseptic milk has an unrefrigerated shelf-life of about 6 months.

Q: Plastic boil-in-bags would really save me time in the kitchen. But doesn't that pouch do something to the quality or taste of food?

A: No, plastic boil-in-bags use a

1.

Since 1983, sales of aseptically packaged juices and fruit drinks have doubled, reaching a present high of \$417 million a year.



5.

Products in retort packaging have a shelf life of 2-5 years — similar to metal cans — as long as the container isn't damaged.



vacuum-sealing process that doesn't affect the food's taste or quality. Once in the bag, the food is cooked and quick-frozen. The plastic packaging does not impart any flavor or change the quality of the food.

Q: My son is going camping and I thought that a couple of cans of the pull-top beans with bacon would be

perfect. But could the cans — they seem like plastic — stand a weekend in the woods?

A: The cans are plastic and could be very useful to your youngster. They are used by the processor the same as metal cans, but they are more dent-resistant and lighter than metal

containers. The pull-top lids also eliminate the need for a can opener.

Otherwise, these plastic containers (see #3) can be handled like standard metal cans. Plastic cans have a shelf life of 6 to 12 months, possibly longer, depending on the ingredients in the product.

Q: The other day I saw some meat that wasn't red like the fresh meat I usually buy, and the packaging was different. Was something wrong with it?

A: The meat you saw was probably vacuum-packaged (see #4), which accounts for the change in color. With traditional packaging, oxygen penetrates the plastic wrapping and combines with a pigment in meat to produce the deep red color.

Vacuum packaging, which actually prolongs meat's shelf life, does not allow air to penetrate the wrapping and combine with the pigment. So while the meat looks "purple," it is just as safe as ever.

Q: I bought one of those new "no-refrigeration-needed" dinners at the store but accidentally put it in the freezer. I took it out and let it thaw. Is it still safe to eat?

A: The dinner is still safe to eat. During processing, the food was placed in a retort container, closed, and the container and food (see #5) brought to a high temperature to sterilize the food and make it shelf-stable. "While freezing and thawing this kind of dinner will not make it unsafe, it may result in some undesirable texture changes," explains Bob Savage, a USDA food technologist.

Also, Savage recommends that the dinner be prepared soon after thawing. "The freezing action may have damaged the container so it would be unwise to store the dinner in your pantry," Savage says. Retort packaging has a shelf life of 2-5 years as long as the container isn't damaged.

— Richard Bryant

2.

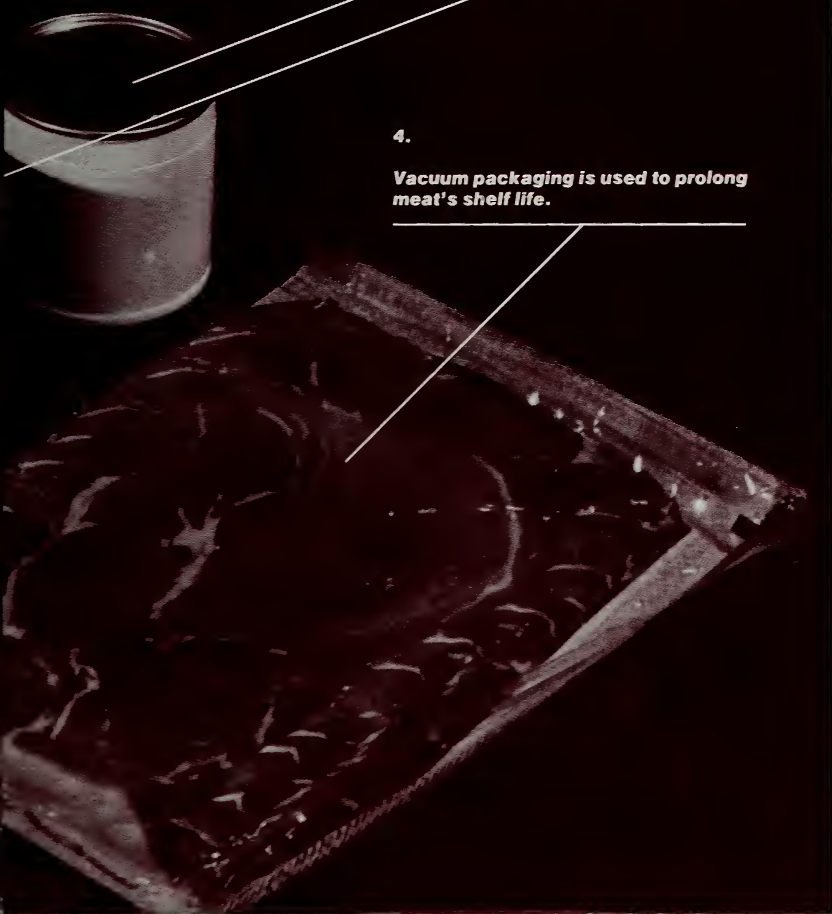
Aseptically packaged milk, long popular in Europe, became available in the U.S. in 1981.

3.

Light-weight, flexible plastic makes lighter, more dent-resistant cans than metal.

4.

Vacuum packaging is used to prolong meat's shelf life.



When You See "Natural" on a Meat or Poultry Label

by Sharin Sachs

Consumers are moving toward a healthier diet — or at least saying they care. At the same time, many consumers are also concerned about drug and pesticide residues in food.

"Natural" and other alternative meat and poultry products now being marketed reflect this interest. What are these products, and who assures that they are accurately labeled?

What "natural" means on a USDA-approved label. "To wear the 'natural' label, a meat or poultry product must satisfy three requirements," said Margaret O'K. Glavin, director of standards and labeling for USDA's Food Safety and Inspection Service.

Glavin said that the product recipe must show:

- 1) no added coloring or artificial ingredients; and
- 2) only minimal processing.
- 3) Further, the label itself must explain the use of the term "natural," as in "Jack's Natural Beef — no added colorings or artificial ingredients; minimally processed."

"Minimal processing" includes traditional techniques used to make food edible or to preserve it, Glavin said. Cutting, grinding, canning, drying and freezing are examples of minimal processing. Once USDA has assured that these three requirements are met, the meat or poultry product can be sold nationwide, Glavin said.

Animal production claims. According to Glavin, about ten labels have also been approved which make claims about

how animals were raised. For instance, their labels might claim that the animals were "raised without hormones or antibiotics."

USDA considers these so-called animal production claims *different* from "natural" claims, Glavin explained, although the same label may contain both a "natural" and an "animal production" claim.

To be acceptable to USDA, an animal production claim must be specific and meaningful. Vague terms like "chemical-free" and "organic," for example, aren't allowed. Common approved claims are "raised without the use of antibiotics," "raised without the use of hormones" and "fed grain grown without the use of pesticides."

Anyone wanting to use these phrases on a meat or poultry label would have to document that the claims are accurate. Further, those animals would have to be raised and transported separate from other livestock or poultry. This is merely to assure that the two groups of animals don't get mixed together.

Cost. You will probably pay more for meat carrying a "natural" or animal production claim. How much more?

"Between 30-70 percent more, depending on supply and demand," said Don Vallancourt, a vice president with Grand Union supermarkets, an east coast chain.

Are people paying this? "Definitely," said Vallancourt. "In fact, we now offer these products in 300 of our 370 stores."

What are the advantages of these products?

Since these alternative products cost more, why would you want to buy them? The answer is that good old staple — it depends.

Some consumers may simply prefer them. However, a producer would be hard-pressed to prove that these products are safer than other meat.

"Over and over, the polls show that consumers are concerned about residues in food," said Dr. Robert Miller, director of the FSIS residue program. "Yet when people get sick from food, it's generally due to the bugs they can't see — the microorganisms that thrive when food is left unrefrigerated too long or otherwise abused. This is why basic food safety — rather

than residues — continues to be a primary concern of the public health community.

"Use of all legal animal drugs and pesticides is unlikely to stop, because these substances are used for very specific, beneficial purposes," Miller continued. "What we are concerned with is proper use, which generally prevents unsafe residues."

All meat is inspected, Miller said, and random samples are tested for illegal residues of animal drugs, pesticides and environmental contaminants. A legal limit represents the maximum concentration of the residue considered safe for *daily* consumption over an entire *lifetime*.

Assuming, then, that these alternative products are no safer for the

Where can I buy "natural"?

While these products are not widely available, Grand Union supermarkets in the New Jersey area and the King Sooper chain in Colorado carry both "natural" labeled meat and poultry, plus products with "raised without hormones or antibiotics" claims.

Want to order by mail? The Center for Science in the Public Interest maintains a list. Write CSPI, Americans for Safe Food, 1501 16th

Street NW, Washington, D.C. 20036. Phone: (202) 332-9110.

general public, might they be safer for some? Could you have an allergic reaction to some tiny amount of a drug or pesticide residue in meat, even if it couldn't be detected by a test?

Some consumers may believe so. Alternative producer Mrs. Dave Farrington of Pine Ridge Farms, Sublaco, Ark., recalled, "Our first sales of poultry raised without any drugs were to chemically sensitive persons."

USDA's residue expert Miller notes that today's sophisticated tests can detect substances present in the parts per billion or even parts per trillion.

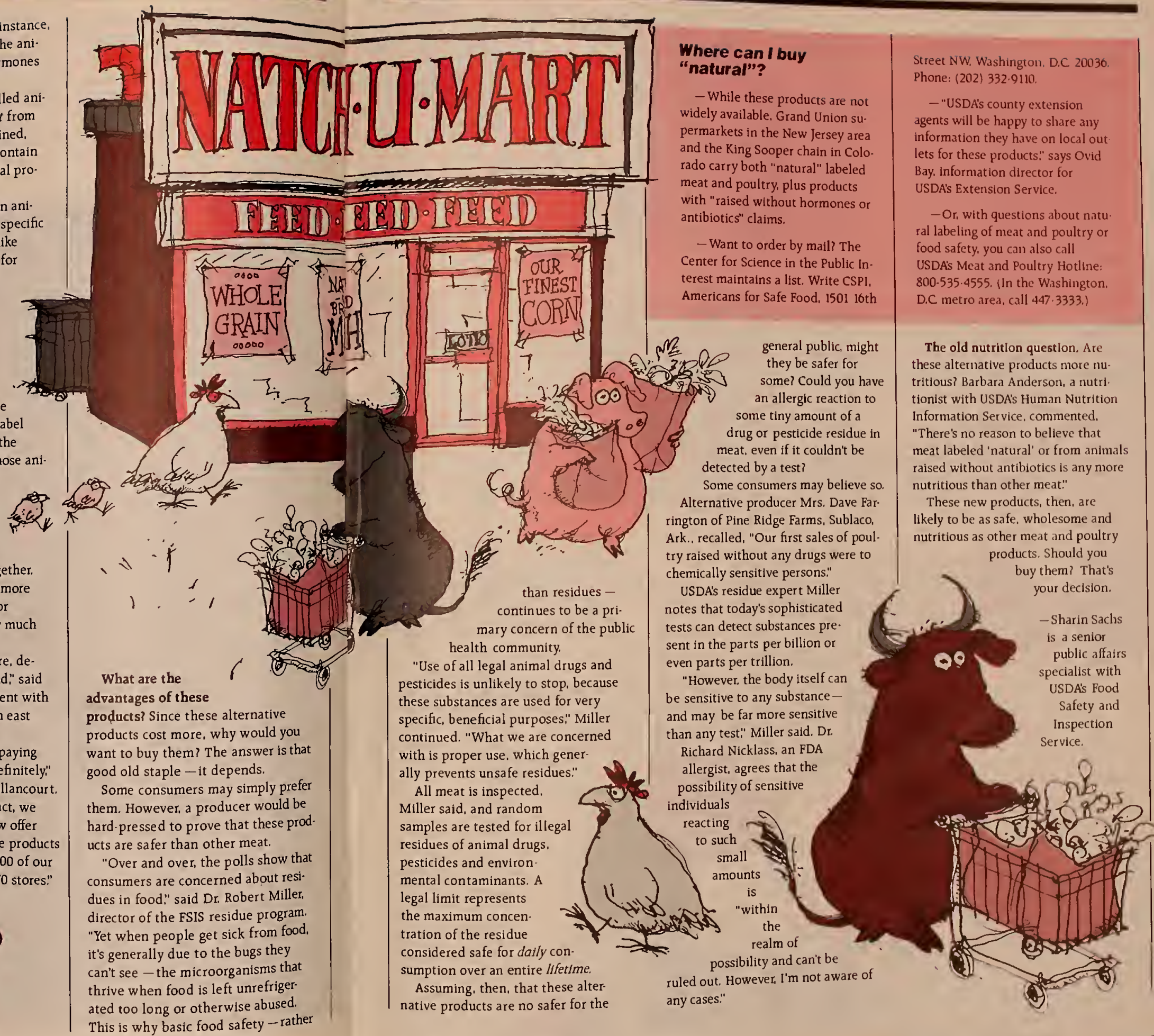
"However, the body itself can be sensitive to any substance — and may be far more sensitive than any test," Miller said. Dr. Richard Nicklass, an FDA allergist, agrees that the possibility of sensitive individuals reacting to such small amounts is

"within the realm of possibility and can't be ruled out. However, I'm not aware of any cases."

The old nutrition question. Are these alternative products more nutritious? Barbara Anderson, a nutritionist with USDA's Human Nutrition Information Service, commented, "There's no reason to believe that meat labeled 'natural' or from animals raised without antibiotics is any more nutritious than other meat."

These new products, then, are likely to be as safe, wholesome and nutritious as other meat and poultry products. Should you buy them? That's your decision.

—Sharin Sachs is a senior public affairs specialist with USDA's Food Safety and Inspection Service.



Spring-cleaning The Kitchen

Sorting through the refrigerator and pantry is probably low on your list of things to do. But

it's important. For safety, taste and nutrition, most food shouldn't be kept over a year. Just follow this easy procedure for your own kitchen clean-up.



Inspector Chicken says the refrigerator should be cold — the freezer should be 0° F, the refrigerator

section not over 40° F. And CLEAN IT OUT before you put food back. Baking soda in water will cut mold inside the box. Bleach in water will take care of bacteria. Check bottle for directions.

Discard mayonnaise or salad dressing if the oil has separated, or if it looks or smells odd.

See some mold? You can cut a small spot from hard cheese. Keep your knife out of the mold and cut out an inch-wide square around and below it. You can scoop a small mold growth from jelly, too. Then take a second clean spoon, and scoop out a safety margin. Discard moldy bread, pastry, soft foods or liquids.

Look at Countertops & Cabinets

Check flour, sugar, tea and spices on your countertops. Clean under and around canisters and boxes. Now look inside your canisters. In a tight-lidded metal canister, sugar will last 2 years. Likewise, properly stored, flour should last 6-8 months. But discard flour if you see weevils, small brownish-black bugs that attack in warm weather.

In an air-tight tin, teabags maintain good quality for about 18 months. Unopened ground coffee in a can lasts 2 years. Opened ground or freeze-dried coffee crystals lasts about 2 months, after that refrigerate it.

Inspector Chicken says home-canned goods should be used within a year

Start with the Refrigerator

Check frozen food — If the freezer is work well. Also ice crystals can invade food causing quality loss.

Discard old, frozen-over goods. Keep other packages if they're not past the use-by date.

Defrost the freezer if necessary. Date the packages you save and place them up front for early use.

Is "forgotten" meat or poultry still usable? Thaw it in the refrigerator. If it smells and looks okay, cook it right away.

Check refrigerated food — This part should be easier since refrigerated items usually announce their need to be discarded.

Remember, though, that fresh meat or poultry only keeps 1 to 3 days. Canned hams needing refrigeration last about 9 months. Vacuum-packed meats

last 2 weeks unopened; 5-7 days opened.



DON'T STORE SPICES OVER THE STOVE! Put them in a cabinet away from heat. Whole spices last about a year; ground spices, 6 months.

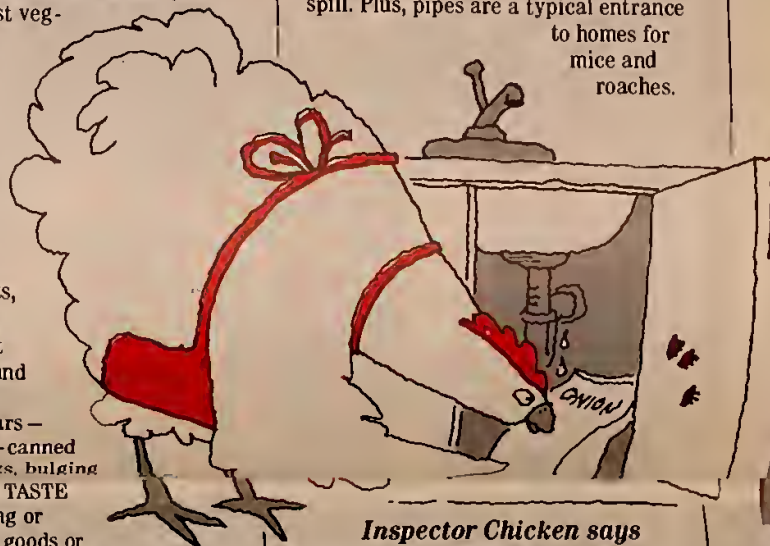
Check your canned goods, bottles, pastas, macaroni and mixes. "On the shelf" means forgotten, doesn't it? So it's critical that you check these items for "eating fitness." Boxed spaghetti or pasta should last a year or more; dry cake or similar mixes about a year. Check packages for use-by dates. Low-acid commercially canned goods (meat, poultry and most vegetables except tomatoes) last 2-5 years in a "healthy" can — no dents, holes, rusting or bulging. High-acid canned goods (tomato products, most fruit and fruit juices) last 18 months in sound containers.

Check glass jars — especially home-canned goods — for cracks, bulging product. NEVER TASTE suspicious-looking or smelling canned goods or anything that spurts liquid when opened. Wrap such things in heavy

plastic and discard them in a secure trash can. They could contain deadly botulism food poisoning.

Check under the Sink

A number of hazards can lurk under the sink. Leaky pipes can drip on food, causing mold and spoilage. Household chemicals or poisons stored there could spill. Plus, pipes are a typical entrance to homes for mice and roaches.



Inspector Chicken says never store food under the sink!

For More Information

Write for these booklets:

The Safe Food Book. Reduce your risk of food poisoning by learning the safe handling of perishable foods. Booklet also gives freezer and refrigerator storage times for meats. USDA, 1985 FREE. Order number 534P from: S. James, Consumer Information Center-Y, P.O. Box 100, Pueblo, Colo. 81002.

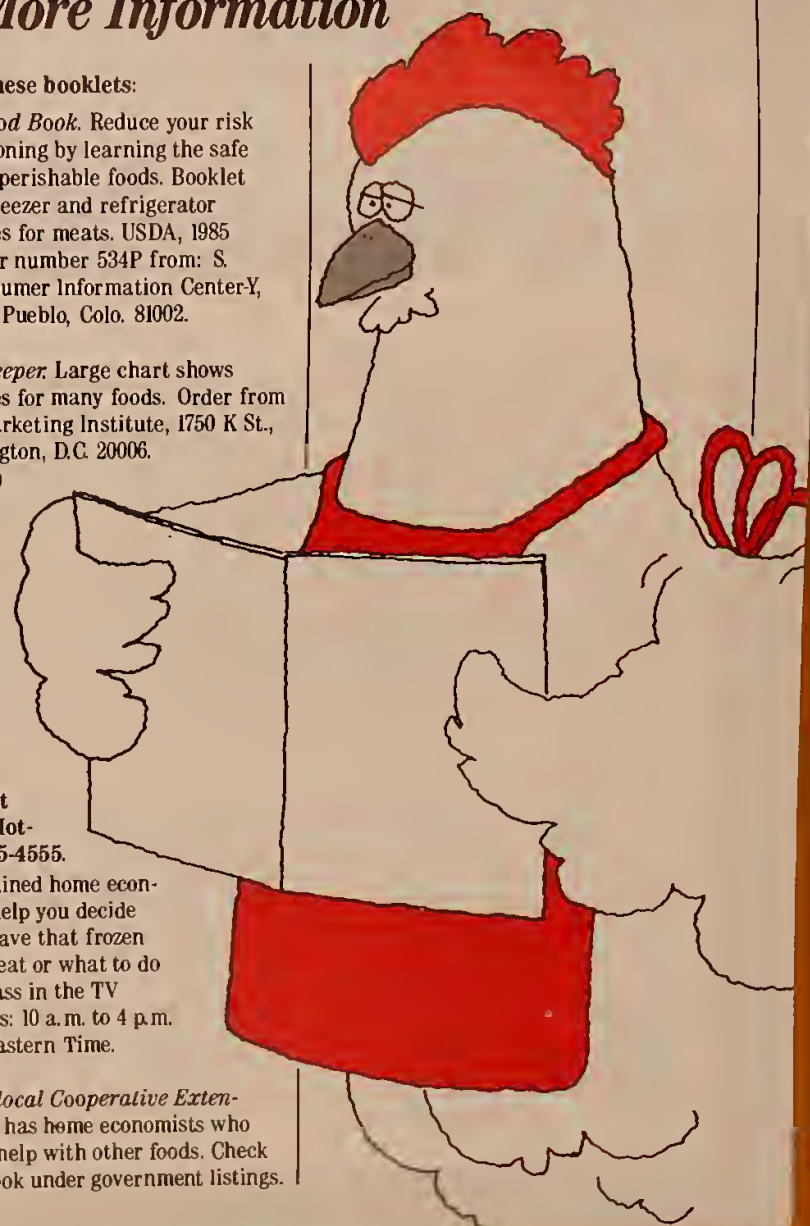
The Food Keeper. Large chart shows storage times for many foods. Order from the Food Marketing Institute, 1750 K St., NW, Washington, D.C. 20006.

Phone: (202) 452-8444. Enclose \$.25 and a legal-sized, stamped, self-addressed envelope.

Or call USDA's Meat & Poultry Hotline, 800-535-4555.

Specially trained home economists can help you decide whether to save that frozen "mystery" meat or what to do about the glass in the TV dinner. Hours: 10 a.m. to 4 p.m. weekdays, Eastern Time.

PLUS, your local Cooperative Extension Service has home economists who can provide help with other foods. Check the phone book under government listings.



Food Safety

Les Crawford Tells How USDA is Modernizing Meat Inspection

Dr. Lester Crawford is the dynamic new associate administrator of USDA's Food Safety and Inspection Service, which handles meat and poultry inspection.

Before joining USDA last December, Crawford ran FDA's Center for Veterinary Medicine. One of the center's chief functions is to serve as the federal clearinghouse for approval of animal drugs.

A veterinarian with a doctorate in pharmacology, Dr. Crawford is a strong advocate of responsible animal husbandry and consumer protection.

The interviewer, Mary Ann Parmley, is the editor of FOOD NEWS magazine.

Q. How did meat inspection get started in this country?

As you probably know, the original Meat Inspection Act was passed in 1906 as Teddy Roosevelt's way of calming public fears roused by Upton Sinclair's book *The Jungle*. The book detailed grossly hazardous and unsanitary conditions in the stockyards and meat-packing plants of the day.

Mandatory federal poultry inspection came along considerably later—in 1957, prompted by the mushrooming of that industry after World War II.

Q. How have meat and poultry inspection traditionally been carried out?

Early in this century, government regulators were very concerned about cleaning up plants. They also knew that some serious animal diseases—like TB and tapeworms—could infect people.

Since you could actually see signs of

these conditions in tissue with the naked eye, the rules called for an inspector to stand there and sort bad product from good.

This continuous, eyes-on checking was thought to be necessary for meat and poultry, perishable foods vulnerable to a number of health hazards.

Q. But with today's concern about salmonella and other microscopic food poisoning bacteria you can't see, how is "eyeball" inspection changing?

Really, we've been modernizing since the 1970s, and many factors—not just bacterial problems—have prompted these changes.

First, advances in animal production and medicine have wiped out many of the old "visible" animal diseases.

Second, the sheer volume of meat and poultry inspected now—in the 100 billion pounds—plus budget problems, means we have to better utilize inspector time.

So we've been developing on-site, quick tests for inadvertent animal drug residues, another more recent problem. We're experimenting with plant workers handling some routine tasks so the inspector can look at real hazards.

And we're working from the farmer to the plant to reduce bacterial contamination of animal feeds, promote bacteria-reducing slaughter and dressing techniques and introduce a new sanitizing spray for plant use.

Q. I hear the 1985 National Academy of Science's report on meat and poultry inspection contains a "blueprint" for updating inspection. Comments?

Actually, FSIS requested that report with the hope, I think, that it would "validate" a direction they already wanted to go in.

And it does push us toward streamlining inspection and further, faster progress in science. The report also emphasizes the need to concentrate limited inspection resources in the areas of greatest public health risk.

How will we do this? Particularly in processing plants—where chicken be-





comes chicken pie, for instance — advanced technology now offers ways to plug into quality-control points where safety can also be checked.

Plugging into these systems — which also means gaining more product information — will yield tremendous time and money savings, since the bulk of today's product is processed.

In addition, again in harmony with the Report, we've stepped back in the food production chain, too, to look at how animals are raised and treated for disease. The new "animal identification" program for swine is one such effort. This will require slaughter plants to know which farmer owned a given pig at slaughter. Should that pig, then, test positive for illegal drug residues, the owner can be called to account.

Q. Congress just gave USDA "discretionary" power to decide how much inspection different meat and poultry plants need. What will this mean in everyday terms?

Legally, discretionary authority gives us the right to base the time our inspectors spend in a given processing plant on two critical factors — the plant's record of complying with federal inspection laws and the precision with which it controls its own operations.

Since the need for hands-on inspection is greater in slaughter plants where animals first come into the food production chain, those plants won't be affected. Inspectors will still be there every day.

But as most of today's product is processed — made into bologna, soup, TV dinners, this new law greatly streamlines inspection.

It also gives us improved flexibility and enforcement power. It's like the teacher finally getting permission to crack down harder on the kids throwing spitballs than on those behaving themselves.

Q. You hear so much about drug and pesticide residues these days. What is USDA doing to keep them out of the meat supply?

All the polls show that consumers

are very concerned about chemical residues. But while it's a significant issue — it has to be with so many drugs and pesticides around — our monitoring program has consistently turned up very few violations.

Nonetheless, we want to stay safe, so our current residue control efforts are two-fold. On the enforcement side, we are continually enlarging our arsenal of in-plant "quick" tests for drug residues. Whereas, with the old lab tests you might not have results for several days, the quick tests can tell you whether a product contains violative residues within hours.

Then there are our ongoing educational efforts. This involves working closely with USDA Extension agents and farmers to lower the incidence of residue problems.

Recently some data-keeping problems in the residue program have surfaced, and we're moving to correct them. This will involve strengthening lines of authority in the program and placing "first alert" responsibility for reporting residue problems more firmly on the in-plant inspectors.

Q. It's been said that USDA's responsibility for a food's safety ends when it leaves the plant for the grocery store. Is this right?

It's a negative way to put it, and not altogether true since we do recall product from the store when there's any danger about its use. But, generally, USDA's task is to ensure the safe *manufacture* of meat and poultry products. Once the consumer takes a product home, it's that person's responsibility to handle it safely.

But USDA does reach out to help. Our tollfree Meat and Poultry Hotline answered 30,000 consumer calls last year. We've published 4 million copies of our booklets — THE SAFE FOOD BOOK, TALKING ABOUT TURKEY and SAFE FOOD TO GO.

We produce this magazine and run special teaching campaigns — for institutional food workers and junior high school students, for instance. We're getting the safety message out, and increasingly, I think, the public is listening.

News Wire

Let's Face It . . . We're Too Fat

That wasn't quite the wording, but it was the finding of a recent study by the Joint Nutrition Monitoring Evaluation Committee, which consists of nutrition experts from leading universities, USDA and the Department of Health and Human Services (DHHS).

Their findings — that some 28 percent of Americans aged 25 to 74 are overweight, and 11.7 million are severely overweight — were based on a review of USDA's 1977-78 Nationwide Food Consumption Survey and DHHS's 1976-80 National Health and Nutrition Examination Survey.

Further, they concluded that much of our national obesity problem is due

to lack of exercise.

The Committee stressed the need to monitor the American diet in relation to total fat, saturated fatty acids, cholesterol, sodium, alcohol, Vitamin C, calcium, fluoride and iron.

Why is this necessary? Many health experts believe major nutrition-related health problems among Americans come from consuming too much fat, saturated fatty acids, cholesterol and sodium. Excessive intakes of these food components are associated with increased risk of cardiovascular diseases.

The Committee also found that the prevalence of health conditions directly or indirectly related to diet are generally highest among the low income populations. Obesity is more prevalent among the poor, and many health problems found disproportionately in this group — including hypertension and diabetes — are related to obesity.

Other findings by the Joint Committee indicate that:

— Overweight is most prevalent

among black women and women below the poverty level.

— Intake of iron is low among young children and females of child-bearing age.

— Calcium intake is relatively low among women, which is cause for concern because calcium deficiency has been implicated in the occurrence of osteoporosis in postmenopausal white women.

— Vitamin C status is low among the poor, especially, one study showed, among adult men who smoke cigarettes. No one can yet say why this correlation holds true.

For more information on the nutritional status of Americans, see the Committee's report, "Nutrition Monitoring in the United States, A Progress Report from the Joint Nutrition Monitoring Evaluation Committee." Single copies (Stock No. 017-022-00957-9) cost \$18.00. Order from: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Phone: (202) 953-1713.

— Irene Goins

FOOD NEWS Quiz

I recently read about a new machine that measures body fat using a special light. Can this be true?

What you may have read about is the machine shown in this photo. USDA researcher, Dr. Joan Conway, is testing a subject with it.

This testing is important, Dr. Conway says, "because how lean you are may be an even better indicator of 'real fitness and health' than your weight alone." Unfortunately, most Americans exceed recommended percentages of body fat.

The machine, based on infrared interactance (IRI) technology, works on the principle that fat, water, protein, and other body components absorb different parts of the near-infrared spectrum.

Use of the machine is currently being refined at USDA's Human Nutrition Research Center in Beltsville,

Maryland. Dr. Conway, a chemist there, and Karl H. Morris, an Agricultural Research Service engineer who invented the technology, are the two chief researchers.

The instrument measures five sites on the body — the front of the upper arm at the bicep (see photo), the back of the upper arm at the tricep, the back just below the shoulder blade, above the hip, and the front of the thigh.

The machine would be helpful for many older people who show no weight gain but who, over time, may lose lean and gain fat tissue. This is a problem since a "fatter" body is a less efficient machine, and the ability to fight disease may also be impaired.

And if smaller, less-expensive, versions are developed, you may one day see them in drugstores and supermarkets beside the test-your-own bloodpressure machines.

— Liz Lapping



USDA Develops Food Safety Video for Food Service Workers

You will soon be able to order a new training package from USDA. Called "Food Safety is No Mystery," the package is meant for use by food service managers to teach their workers safe food handling techniques.

The package contains a 30-minute videotape and accompanying lesson plans on sanitation and personal hygiene, safe food preparation, the prevention of cross contamination and safe cooling and heating methods.

It's directed at the busy food service manager who must supervise and train personnel in nursing homes, hospitals, daycare centers and school cafeterias.

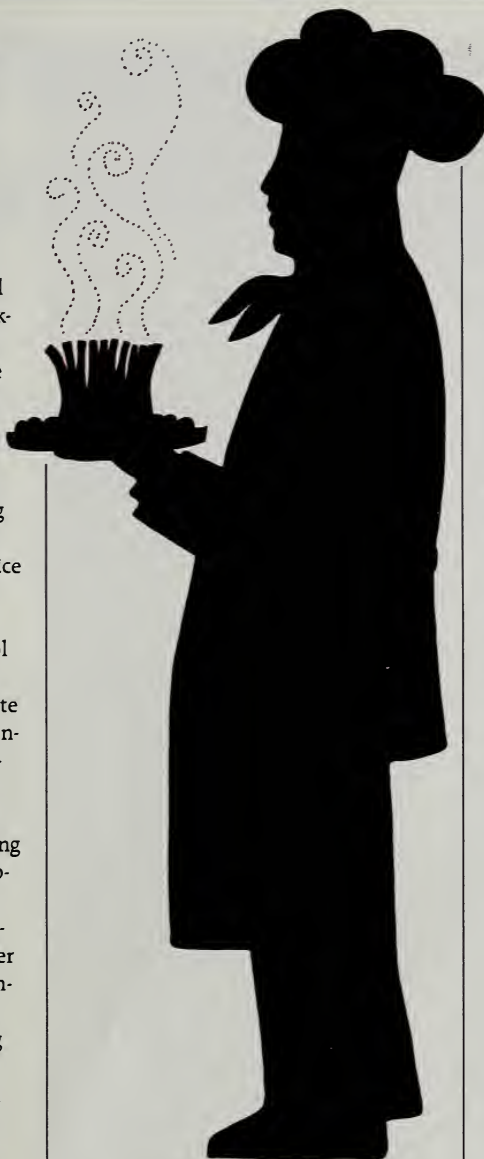
"There is an urgent need to educate food service workers in safe food handling," said Nancy Robinson, FSIS information director. "The latest CDC report shows over half of the recent outbreaks of food poisoning occurring in restaurants and food service establishments," she said.

In a large kitchen where many different foods are handled, any number of mistakes can result in food poisoning. For example, a perishable dish may be left unrefrigerated for a long period, an employee who has a cold may accidentally cough or sneeze on the food, or a cutting board may not be properly cleaned before it's used again.

How does FSIS know what kind of training materials food service managers need? Easy, we've been working with an advisory committee. To name a few, committee members include The Washington Hospital Center, the Washington Home and Hospice and the District of Columbia Health Department. We've also been talking to Manor Care, a national nursing home operation.

Look for how-to-order details in the next issue of FOOD NEWS.

— Irene Goins



Retailers Can Use New Quick-Test to Buy Fresher Ground Beef

Is this a familiar scenario? You follow the U.S. Department of Agriculture's recommendations for storing ground beef, but when you get ready to cook it, you find it has a "sour odor." Knowing your rights as a consumer, you immediately take it back to the supermarket for a replacement.

With the help of a new test, which

involves using liquid chromatography to verify freshness, bulk buyers of ground beef—like your local supermarket—may not get as many hamburger "returns."

"The test was developed to check hamburger used in the school lunch program," said Dr. Douglas King, the chemist with USDA's Agricultural Research Service who developed the test. "Then we realized that retailers who have access to laboratories could also benefit from it. With the test, they can have more control over the quality of products they sell."

Retailers don't intentionally sell spoiled ground beef to customers. If they did, they wouldn't be in business very long, King said.

Usually, retailers purchase coarsely ground beef and then turn it into fine-ground hamburger. Unfortunately, they don't always know how long the beef has already been refrigerated in storage.

"If the meat is stored for a long period, lactic acid—that's naturally present or produced by bacteria in the meat—can build up and cause the meat to spoil," King explained.

Sometimes the meat will have a sour odor, which obviously indicates spoilage, he said. But, even when there is no odor, retailers can get stuck with a product that has a "skippy" shelf-life.

"But this new ground beef test will allow them to chemically check the levels of lactic acid in the meat *before* they buy it," said King. "If the levels are high, they can decline purchase."

It takes just one hour to perform the test in a laboratory, as compared to other methods which take nine hours or more, said King.

"Next we may adjust the test so retailers can sample the ground beef on the "spot" rather than send it to a laboratory," he said.

For more information on the ground beef test contact: Dr. Douglas King, USDA Agricultural Research Service, Western Regional Research Lab, 800 Buchanan St., Albany, Calif. 94710. Phone: (415) 486-3540.

— Irene Goins

Dr. Dull's Fantabulous Onion Meter

While "Dr. Dull's Original Onion Meter" may sound like a carnival sideshow attraction, it isn't. It's a state-of-the-art light meter that can determine how much carbohydrate an onion contains, and therefore how marketable it is. High carbohydrate onions, Dull says, have a longer shelf-life and a higher yield when processed.

The onion meter, a development of the new technology of spectrophotometry, allows plant breeders to scan onions for desirable traits without cutting into them. Carbohydrates and simple sugars in the onion absorb the near infra-red light the machine aims at it. So the less light that gets through to be read by the computer, the sweeter, longer-lasting and more "desirable" the onion is.

How is this an advantage? Traditionally, sight, taste, and smell have

been used to analyze fruits and vegetables. Or fruits and vegetables are cut into and tested for the desired breeding characteristics. Unfortunately, tests using the senses aren't objective. And, once cut into, most fruits and vegetables spoil and must be discarded.

With the light meter, however, you can determine the composition of fruits and vegetables without wastage. Selection for plant breeding is greatly enhanced and objective plant desirability standards can also be developed.

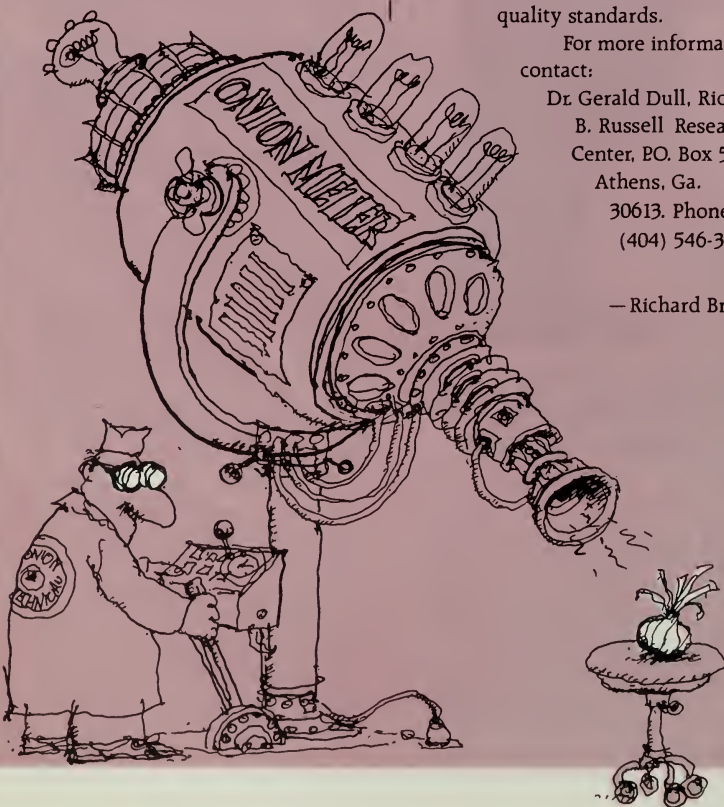
Dr. Gerald Dull, a chemist with USDA's Agricultural Research Service in Athens, Ga., and Dr. Gerald Birth, an engineer there, began work in 1973. They perfected the onion tester in 1985.

But they're far from finished with vegetable evaluation. Research on melon and potato meters is in the works. Dr. Dull says that, eventually, a commercial meter adaptable to a number of fruits and vegetables could be built. Packinghouses and retail distributors could use it to ensure quality standards.

For more information contact:

Dr. Gerald Dull, Richard
B. Russell Research
Center, P.O. Box 5677,
Athens, Ga.
30613. Phone:
(404) 546-3320.

— Richard Bryant



Bessie Jones Berry has a master's degree in consumer affairs from Howard University that included an internship in the White House Office of Consumer Affairs. She has taught foods and nutrition in public school.



Jody Siegel, resident computer expert, manages the retrieval and analysis of hotline data. She recently received her M.S. degree in nutrition from the University of Maryland.

Who's Running the Hotline?

Six home economists now operate USDA's Meat and Poultry Hotline, 800-535-4555. It's quite a job — they answered some 29,000 calls last year. What does it take to handle this task? Dr. Georgia Neruda, hotline coordinator, says "you need the skills of a psychologist, detective, business advisor and teacher." This is because the problems are so diverse — importers' problems with regulations, consumers

worried about food poisoning, and, repeatedly, people needing basic food handling advice for a wide range of products. Neruda considers the hotline's teaching function essential. "We want to help callers not just through a single crisis but, overall, to become better informed, safer food handlers," she says.

And now he-e-e-e-re's the Hotline!



Karen Tracey brings with her seven years of experience as a home economics teacher in rural Kansas high schools. She holds a home economics degree from Central Missouri State University.



Dr. Georgia Stevens Neruda, hotline coordinator, worked for ten years as a state extension specialist in Nebraska and Maryland. This involved lecturing and teaching through newspaper, television and professional workshop forums. Dr. Neruda holds degrees in home economics, education, family economics and consumer affairs from the Universities of Nebraska and Maryland.



Susan Templin, senior home economist, has a home economics degree from the University of Maryland. Ms. Templin has a marketing background in the food industry and has conducted cooking and microwave-use classes.



Diane Van Lonkhuyzen has worked as a consumer advisor to a major utility company and as a consultant to numerous appliance manufacturers. She has a home economics degree from the University of Maryland.

— Prepared under the direction of
Dr. Georgia Stevens Neruda

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